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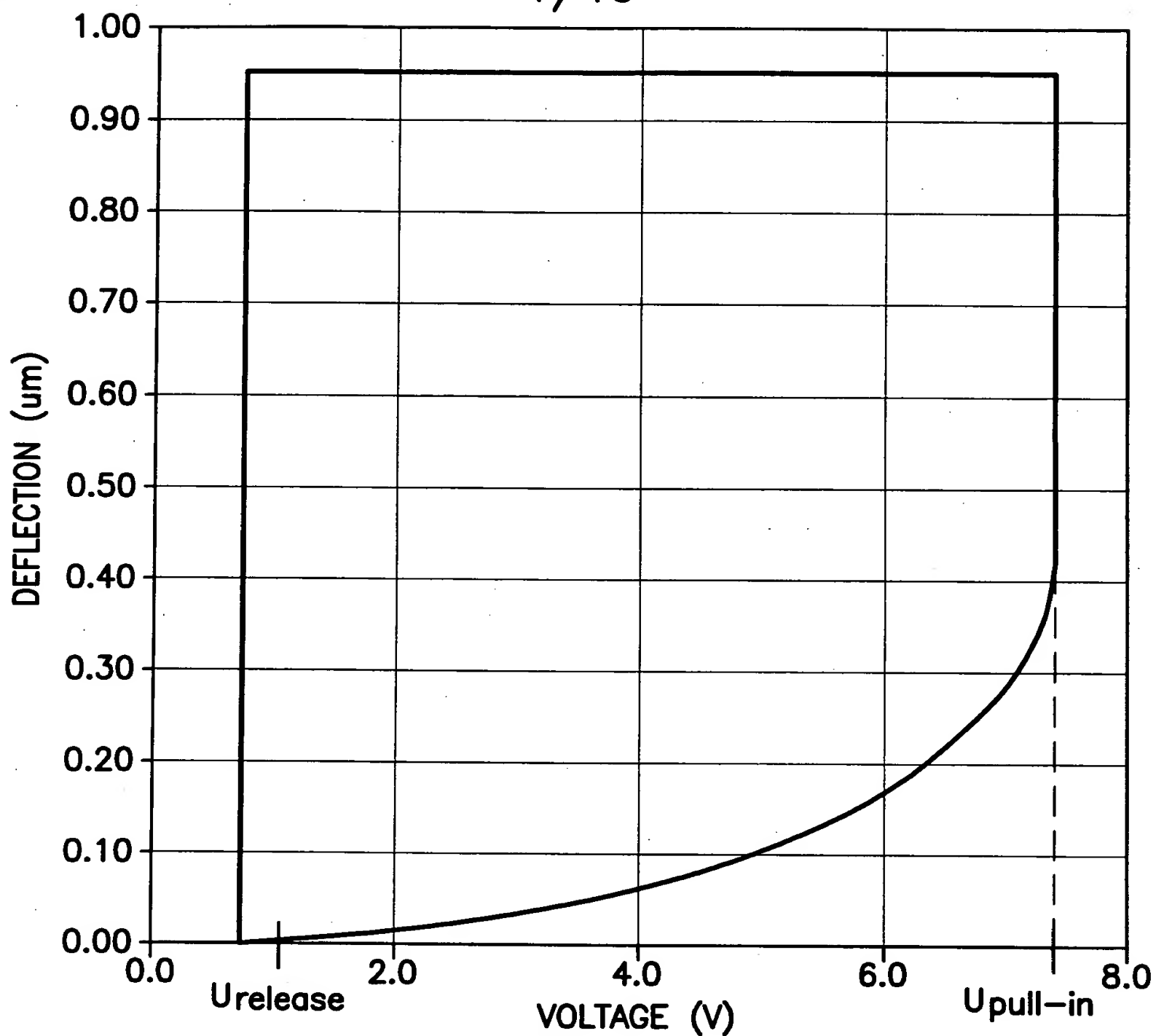


FIG. 1
PRIOR ART

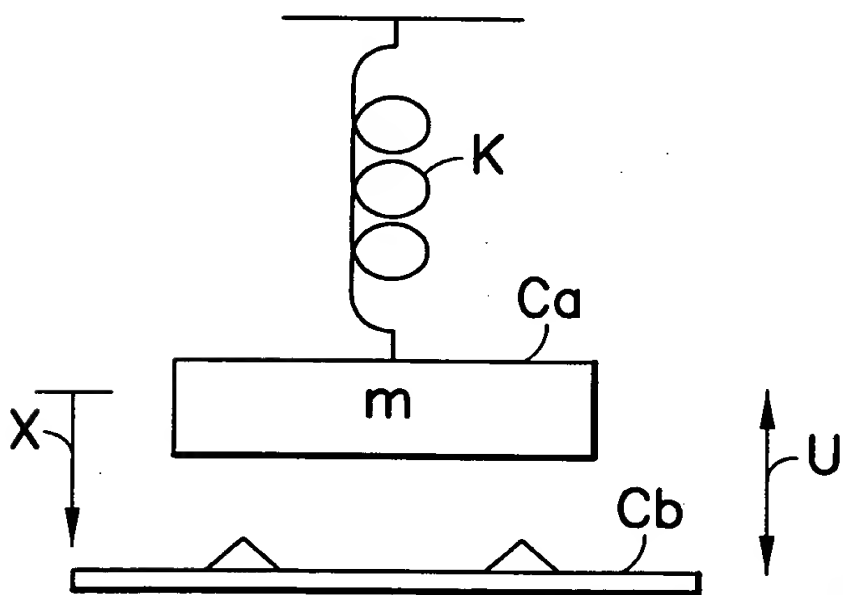
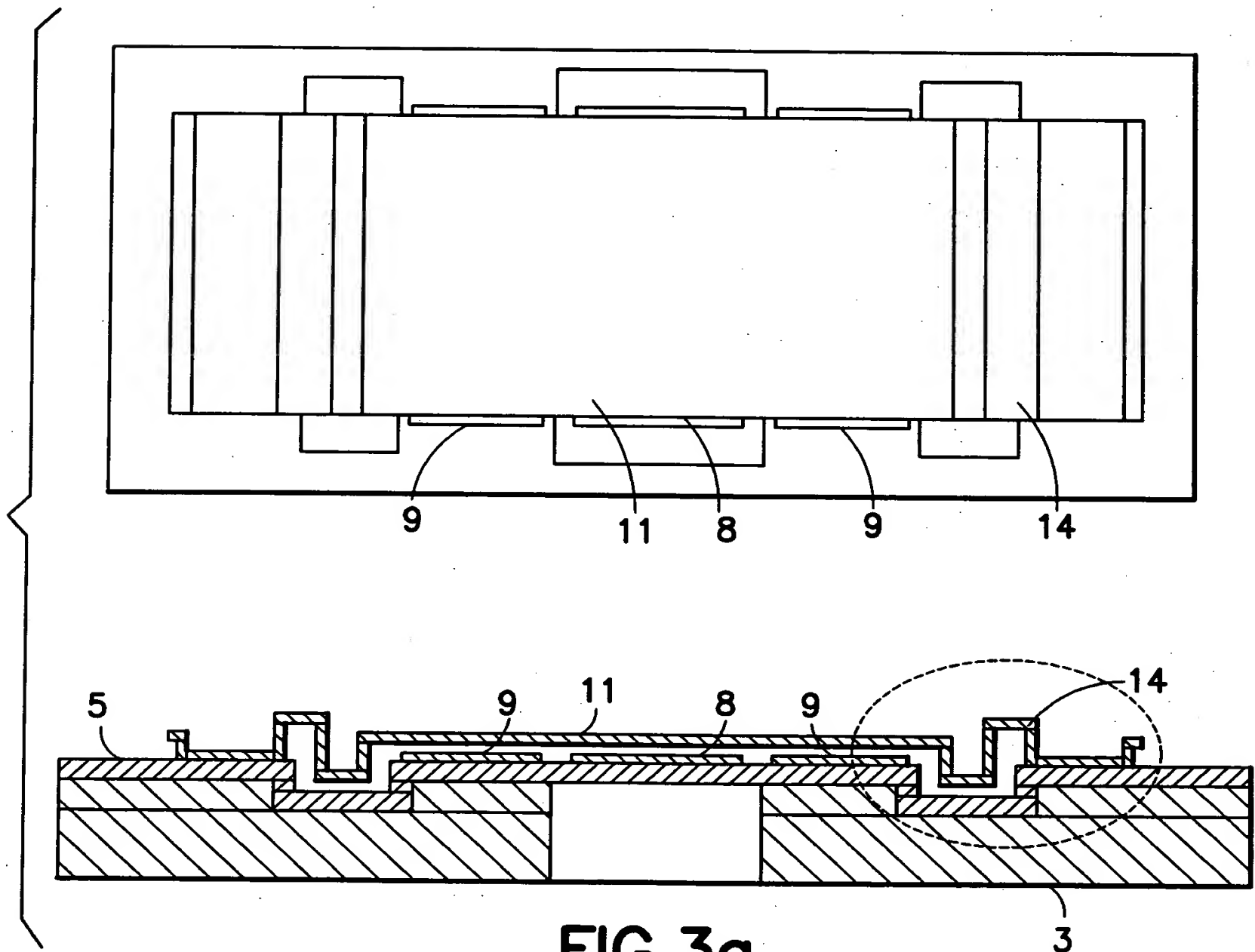


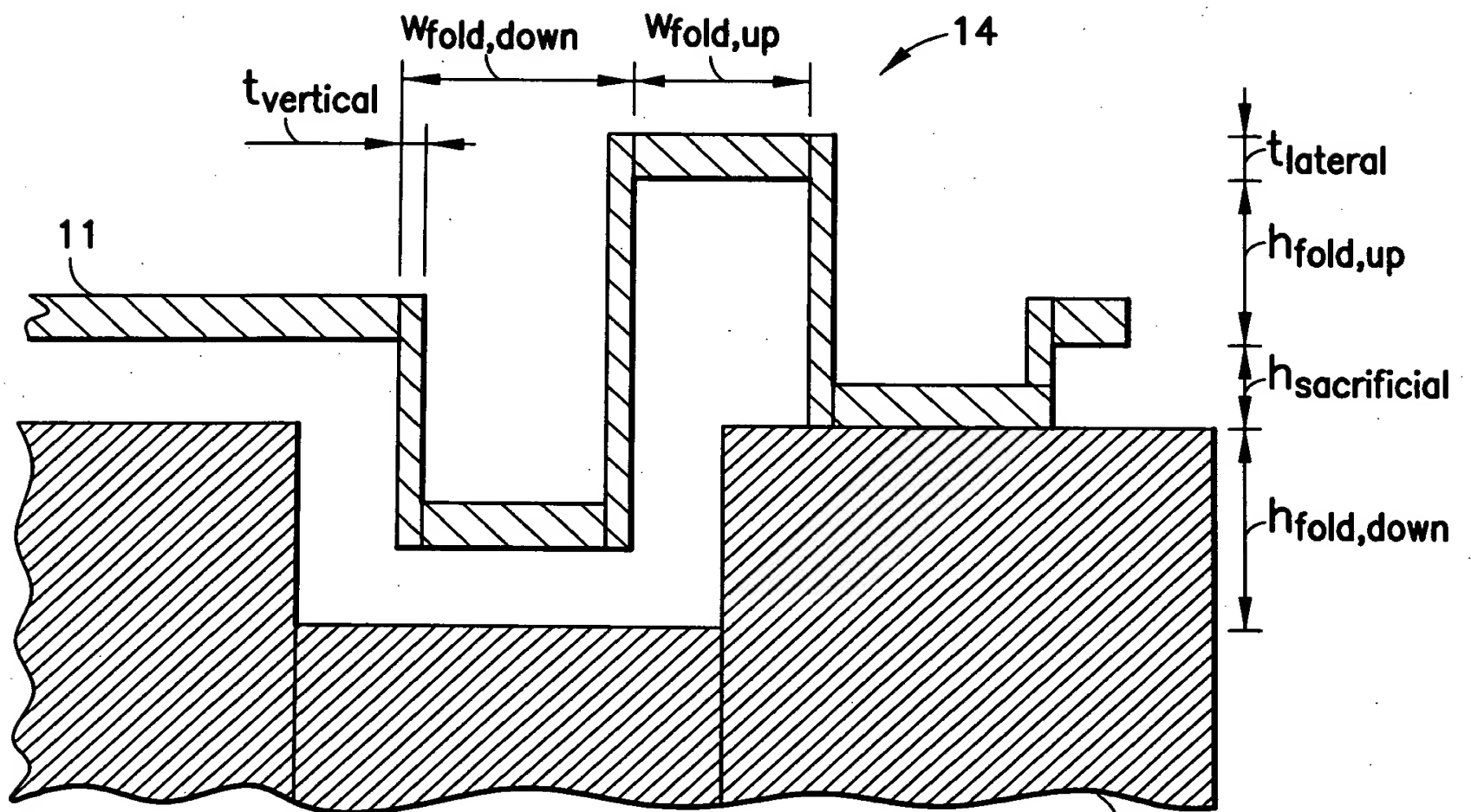
FIG. 2
PRIOR ART



S.N. 09/783,059
"MICROMECHANICAL TUNABLE..."
Inventor(s):
Docket No. 297-010113-US (PAR)
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"Replacement Sheet"

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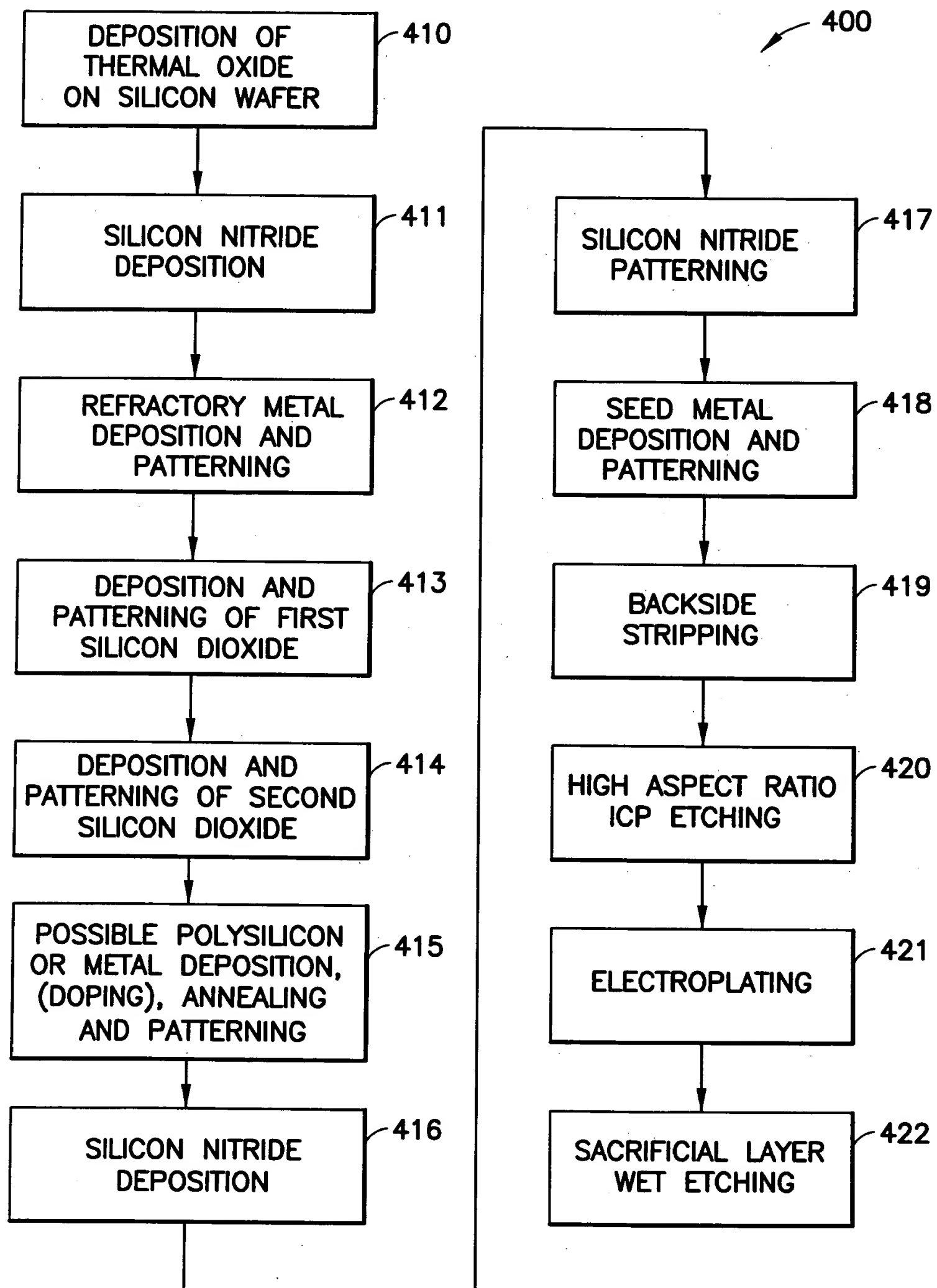
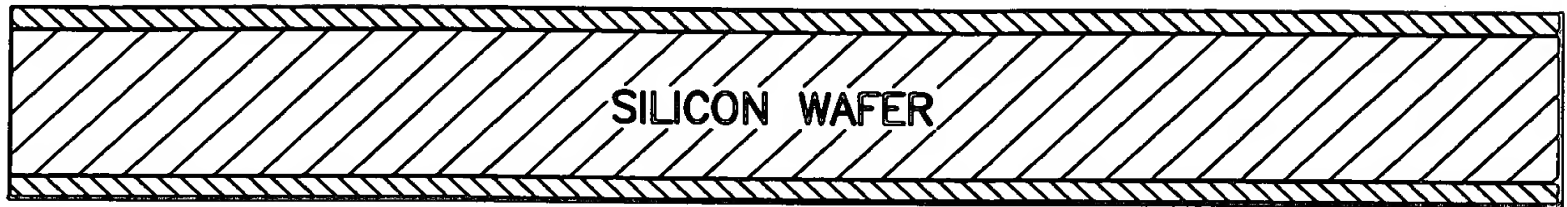


FIG.4a

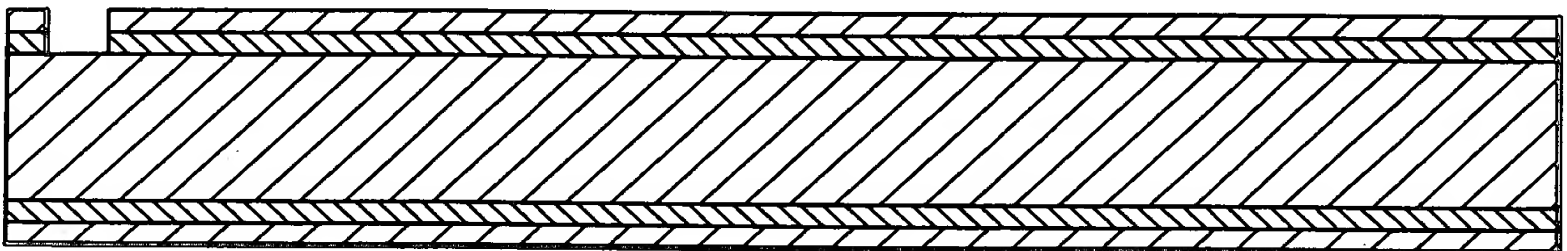


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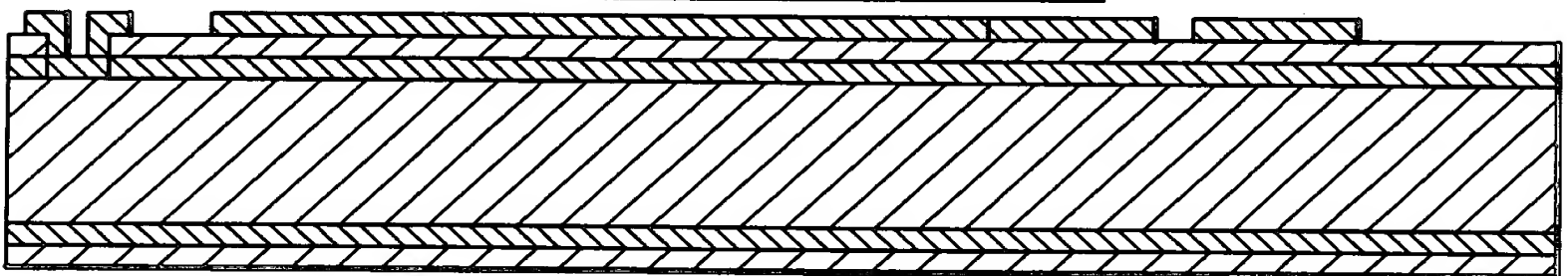
410 THERMAL OXIDE ($\sim 1\mu\text{m}$)



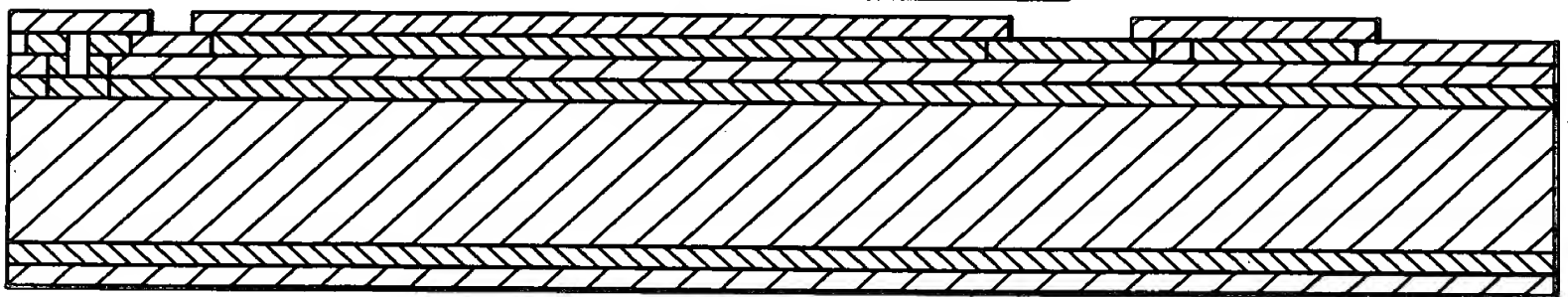
411 SILICON NITRIDE DEPOSITION ($\sim 1\mu\text{m}$) AND PATTERNING



412 REFRACTORY METAL (MOLYBDEEN OR TUNGSTEN)
DEPOSITION AND PATTERNING



413 FIRST SILICON DIOXIDE DEPOSITION AND PATTERNING
(PLASMA) ($0.4-0.5\mu\text{m}$)



414 SECOND SILICON DIOXIDE DEPOSITION AND PATTERNING
(PLASMA) ($0.5\mu\text{m}$)

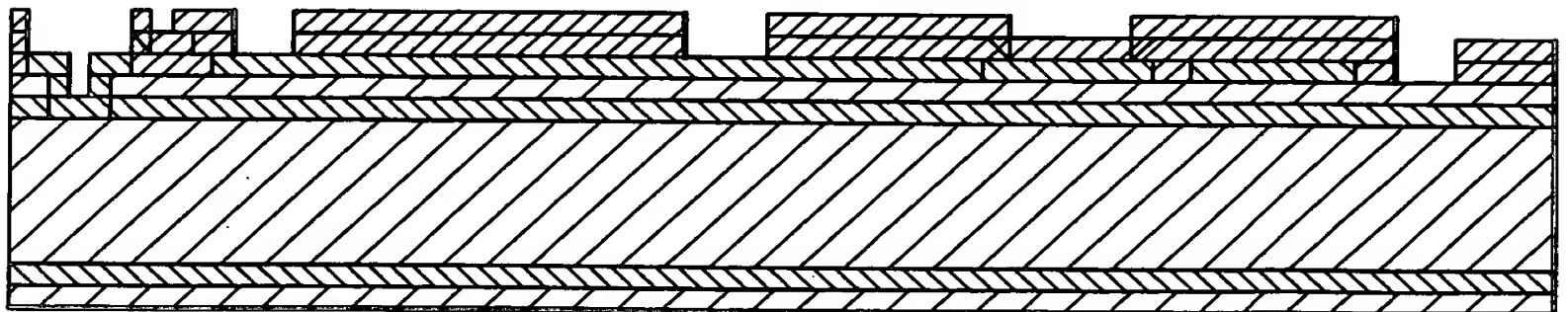
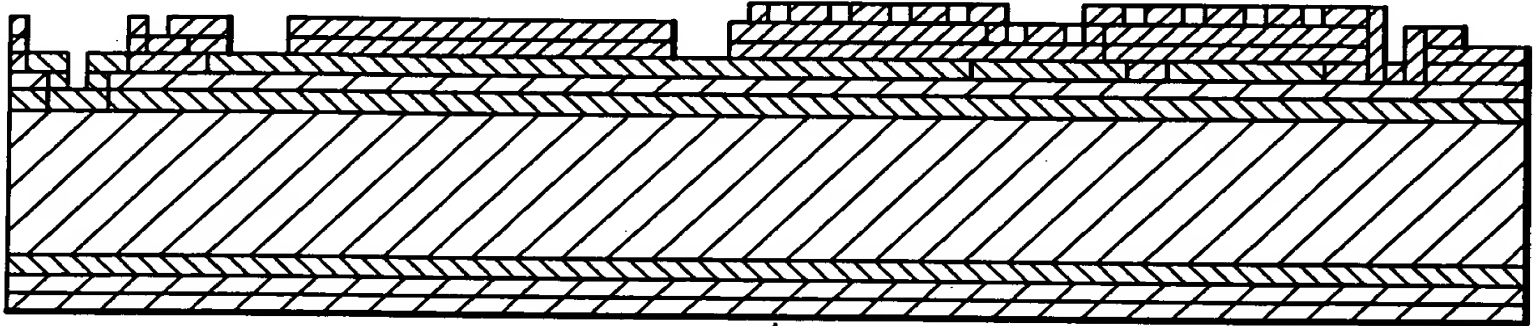


FIG. 4b

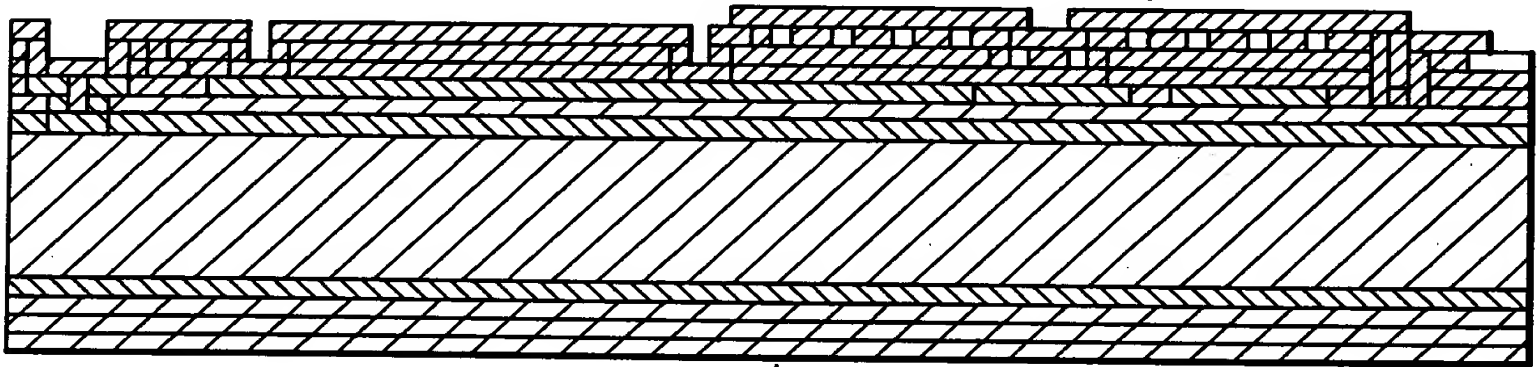


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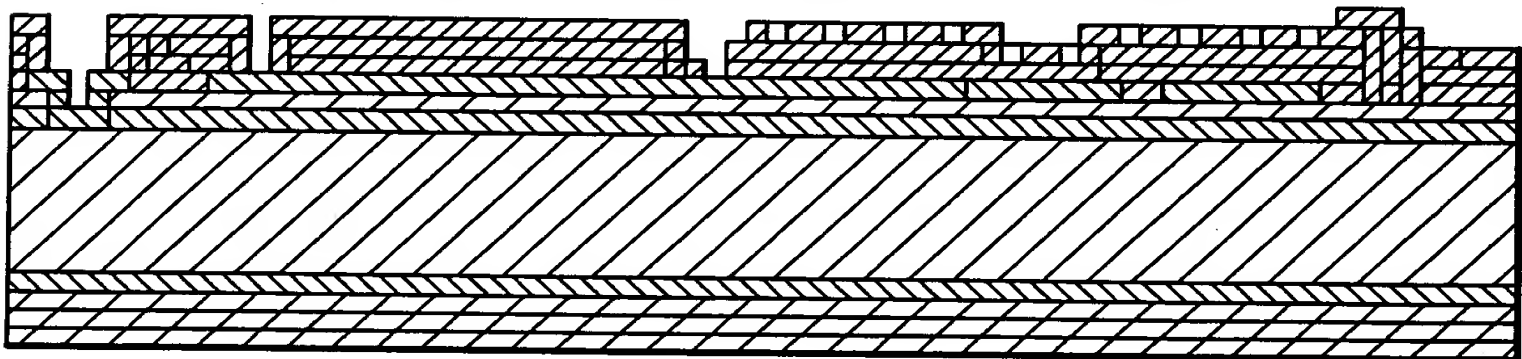
415 POLYSILICON DEPOSITION ($2-5\mu\text{m}$), DOPING, ANNEALING AND PATTERNING; (PolySi: $<5\Omega/\square$; TENSILE RESIDUAL STRESS: 10MPa)



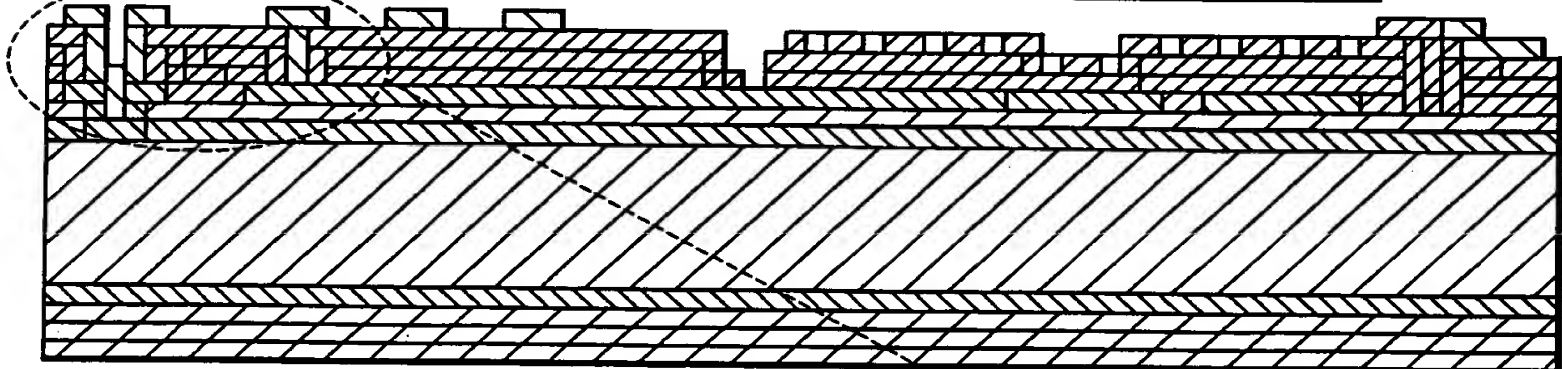
416 SILICON NITRIDE DEPOSITION ($0.3\mu\text{m}$)



417 SILICON NITRIDE PATTERNING (PLASMA)



418 SEED METAL DEPOSITION AND PATTERNING



500 nm Au
300 nm SiN
800 nm SiO₂
500 nm TiW
1 μm SiN
1 μm SiO₂

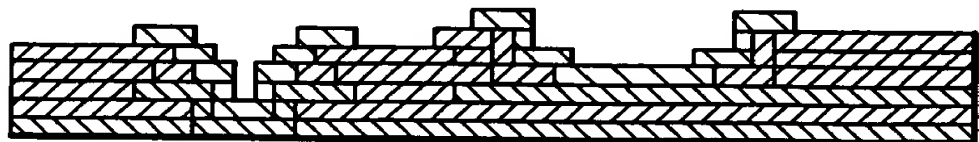


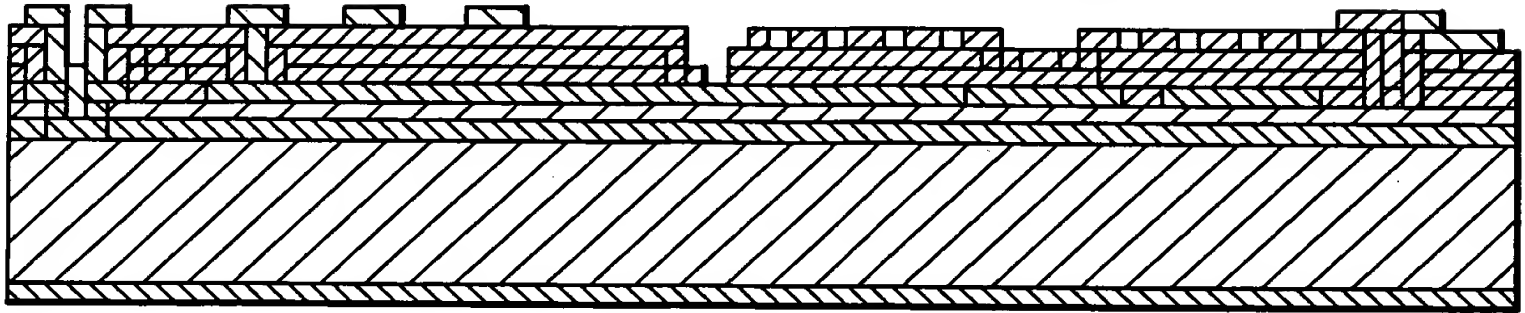
FIG.4c



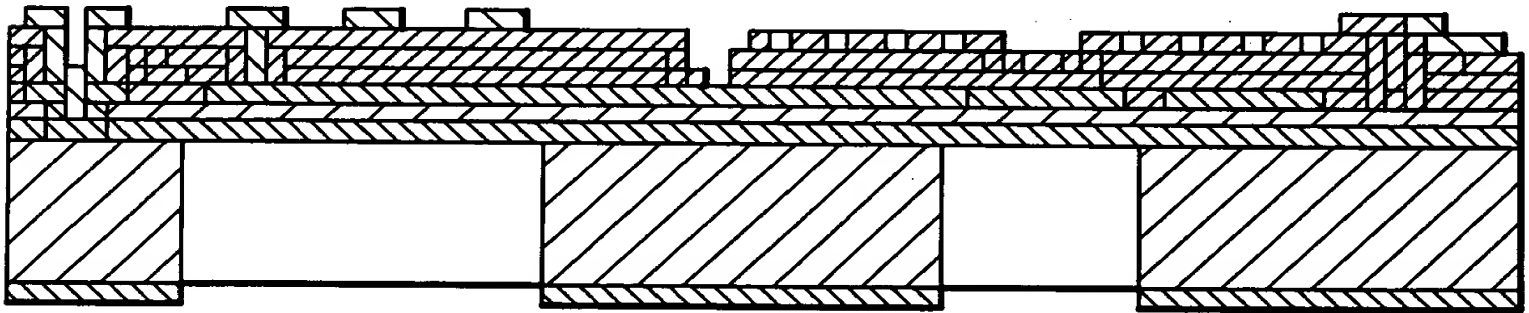
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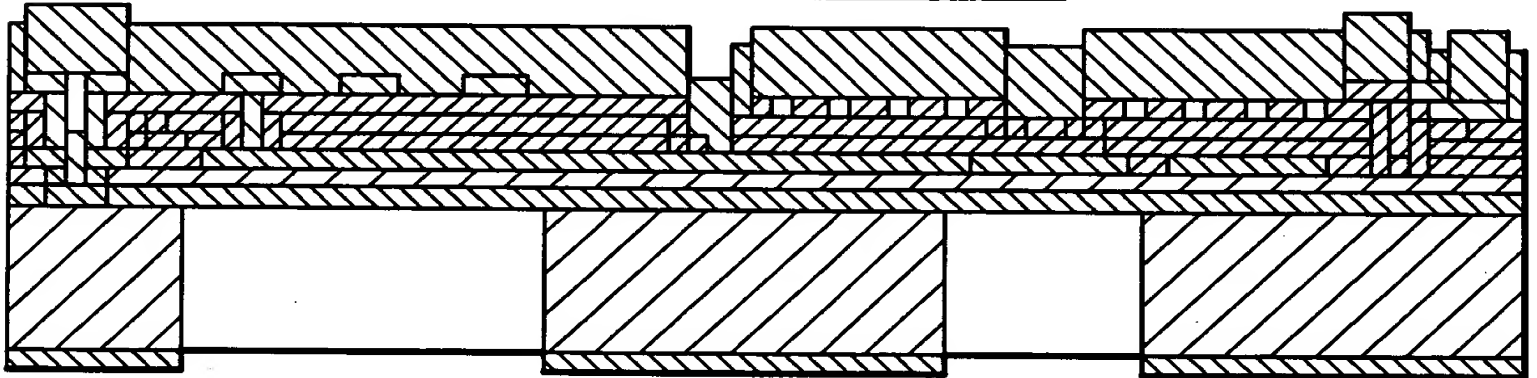
419 BACKSIDE STRIPPING (PLASMA)



420 HIGH ASPECT RATIO ICP ETCHING



421 ELECTROPLATING



422 SACRIFICIAL LAYER WET ETCHING (HF)

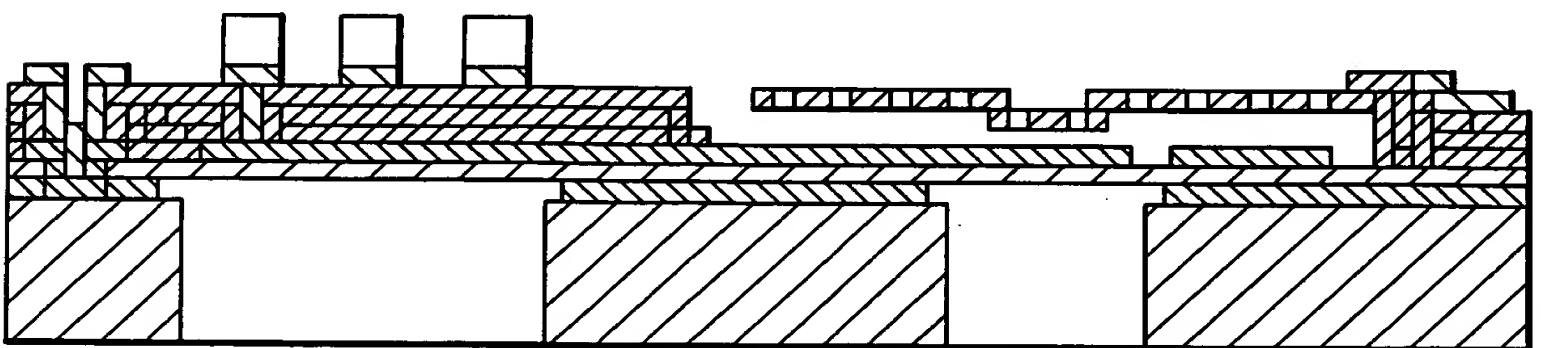


FIG.4d



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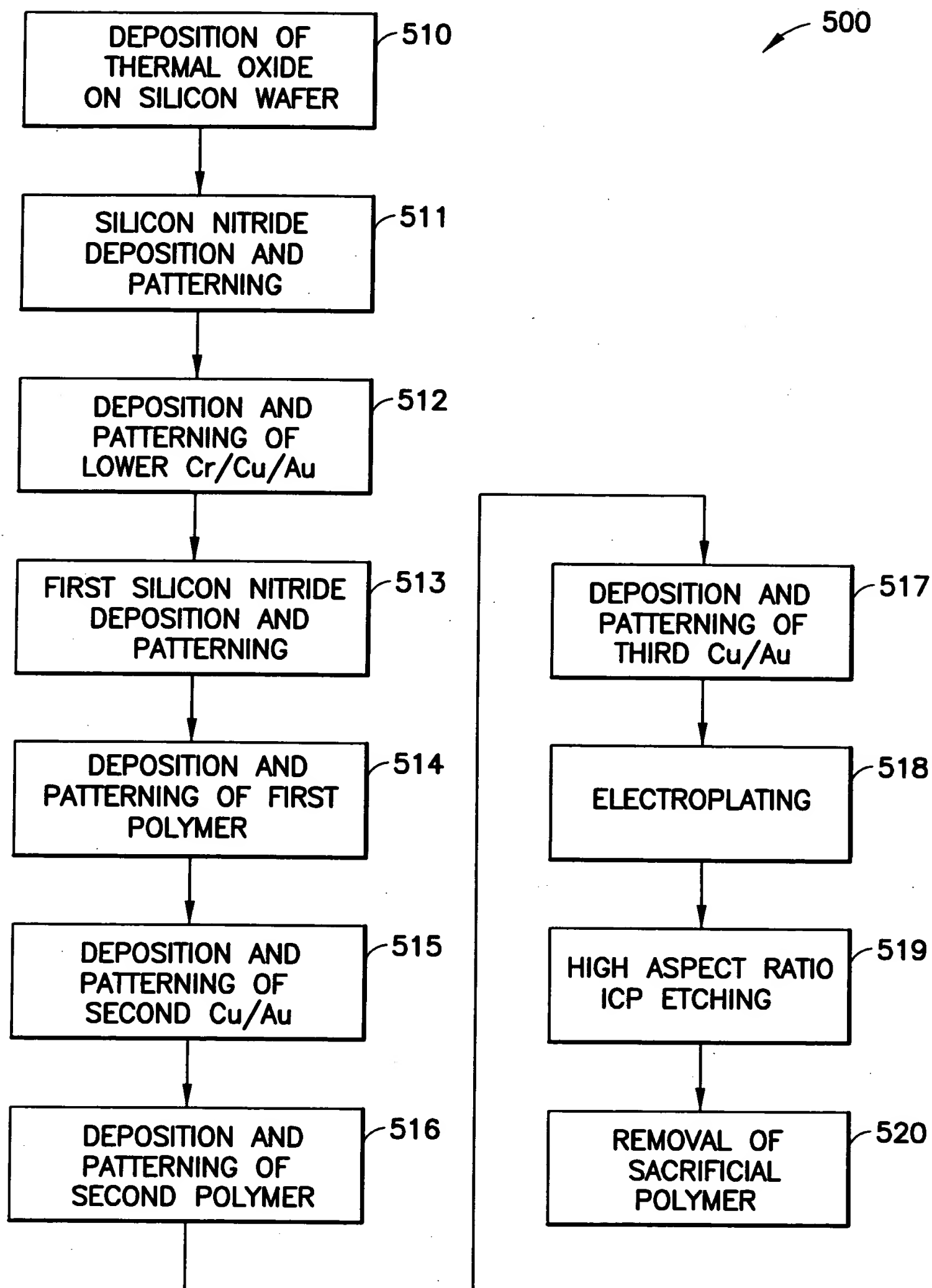
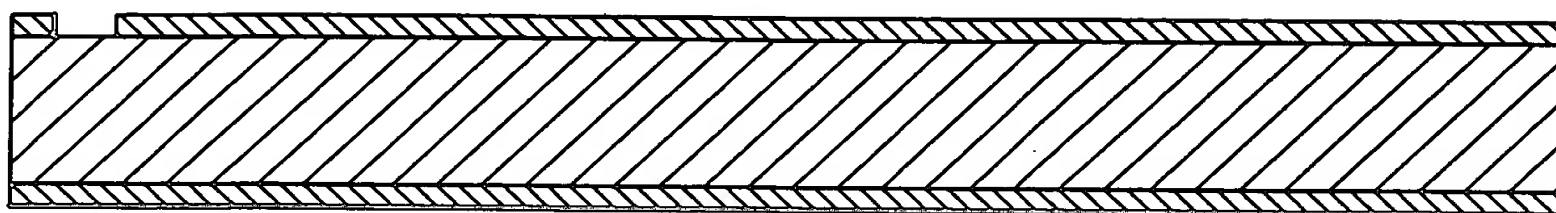


FIG.5a

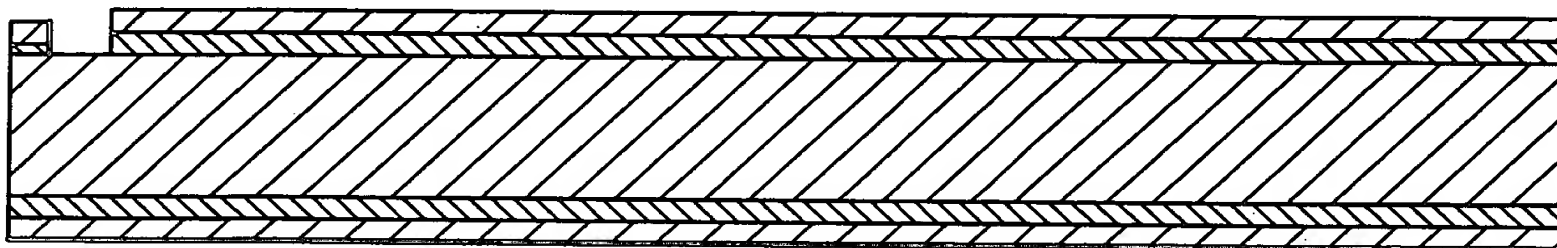


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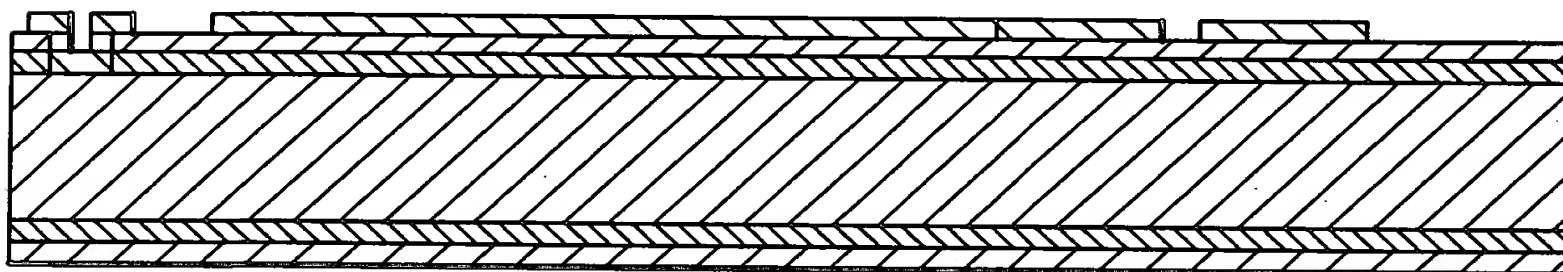
510 THERMAL OXIDE ($\sim 1\mu\text{m}$)



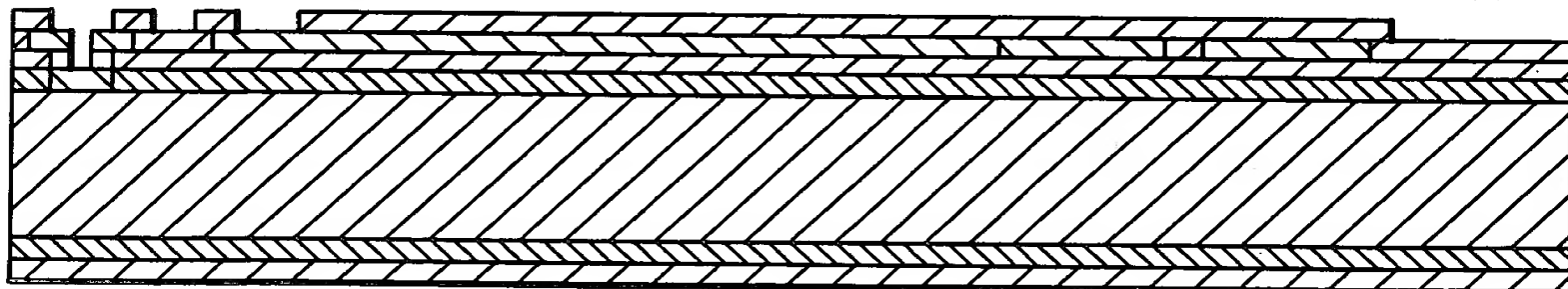
511 SILICON NITRIDE DEPOSITION ($\sim 1\mu\text{m}$) AND PATTERNING



512 LOWER Cr/Cu/Au DEPOSITION AND PATTERNING



513 SILICON NITRIDE DEPOSITION ($0.2-0.3\mu\text{m}$) AND PATTERNING



514 FIRST POLYMER DEPOSITION AND PATTERNING

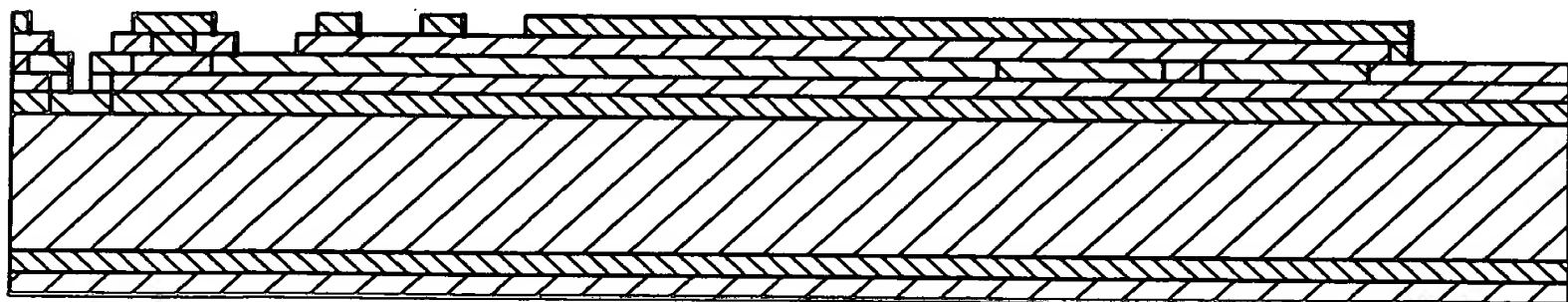
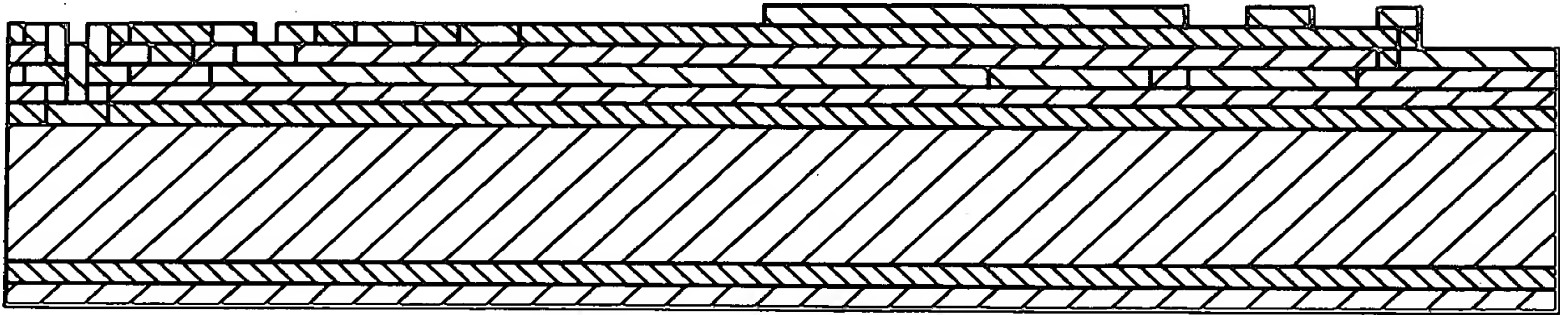


FIG.5b

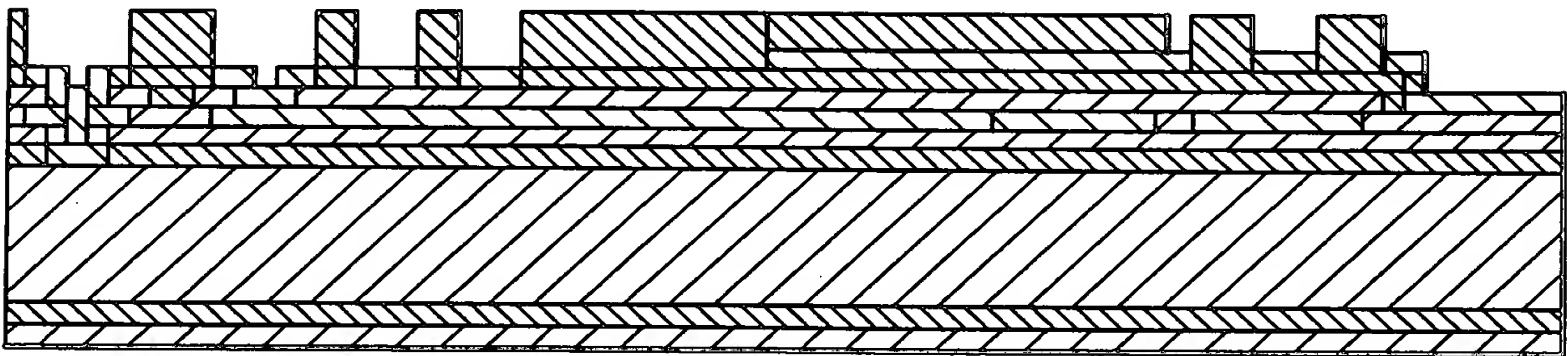


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515 SECOND Cu/Au DEPOSITION AND PATTERNING



516 SECOND POLYMER DEPOSITION AND PATTERNING



517 THIRD Cu/Au DEPOSITION AND PATTERNING

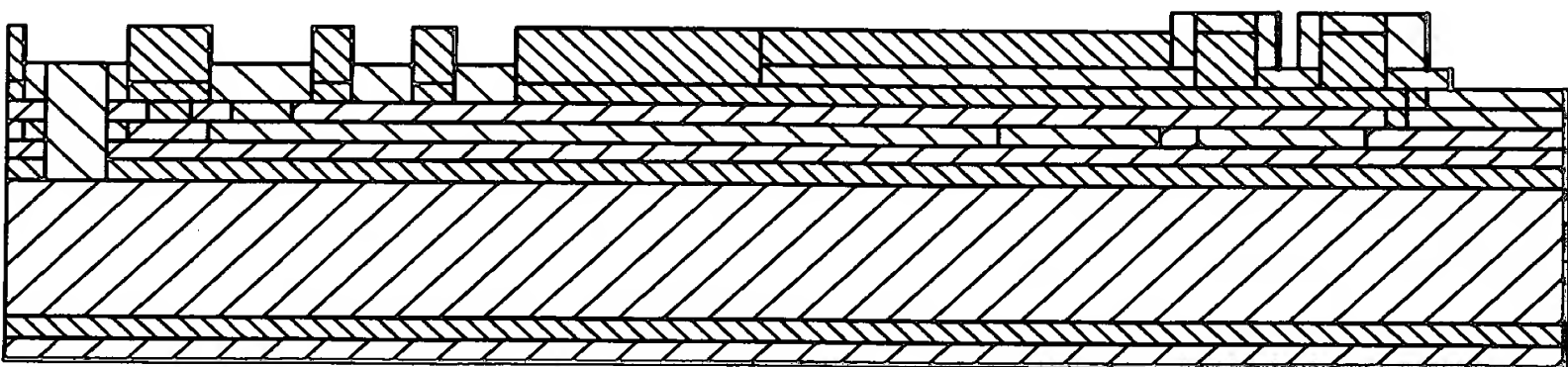


FIG.5c



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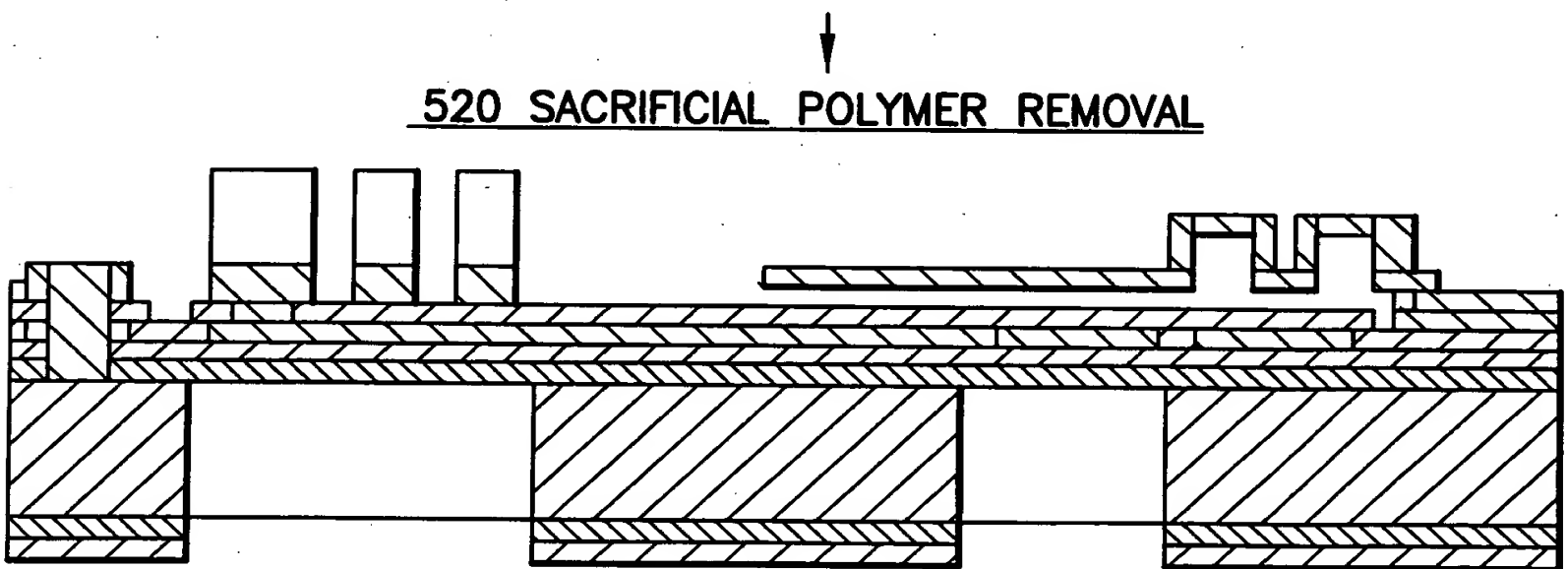
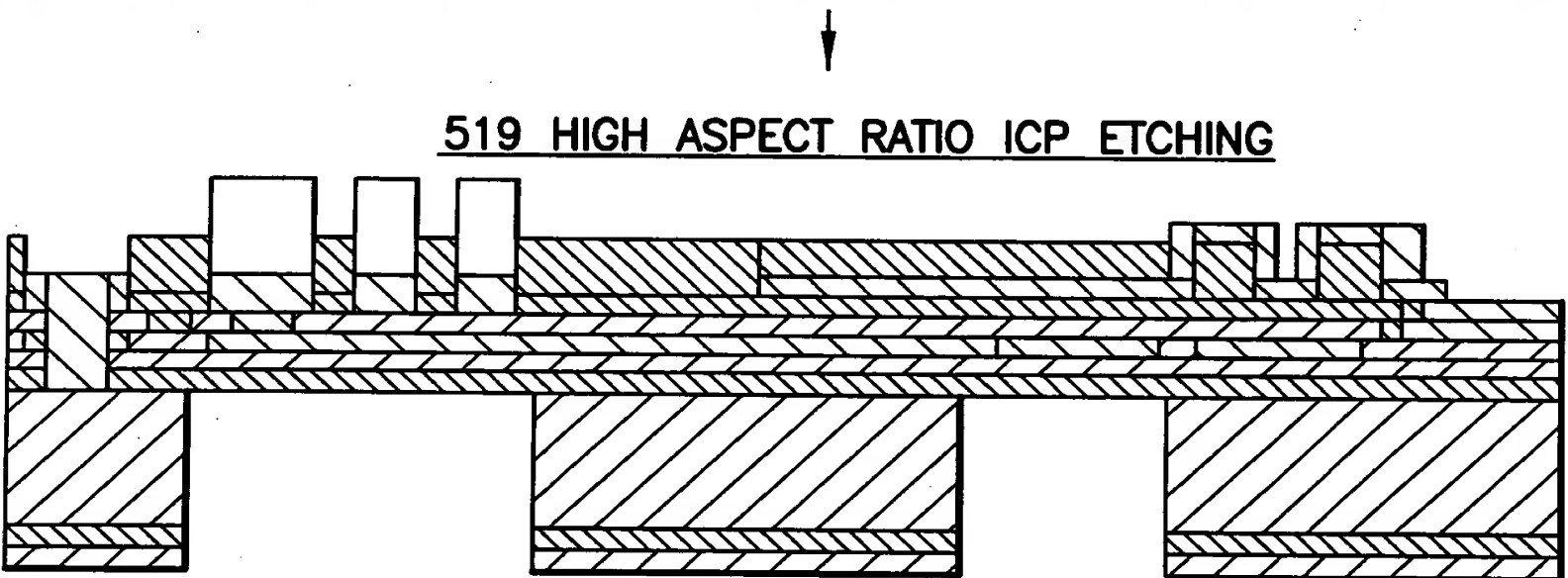
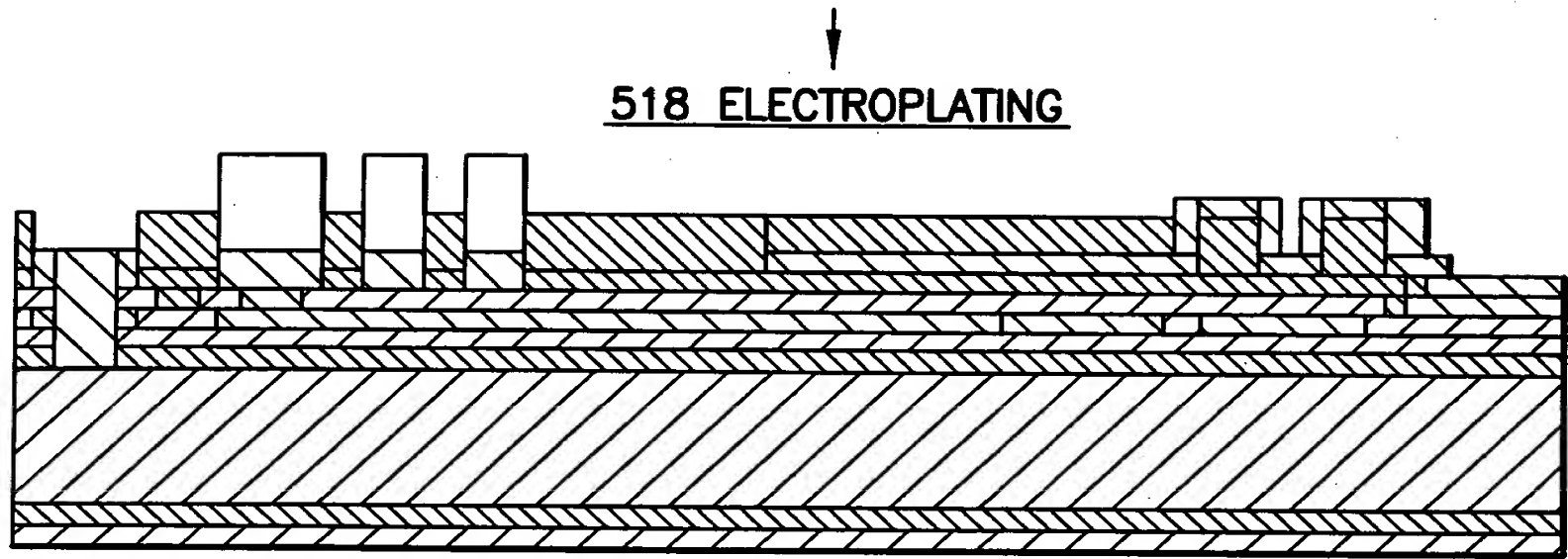


FIG.5d



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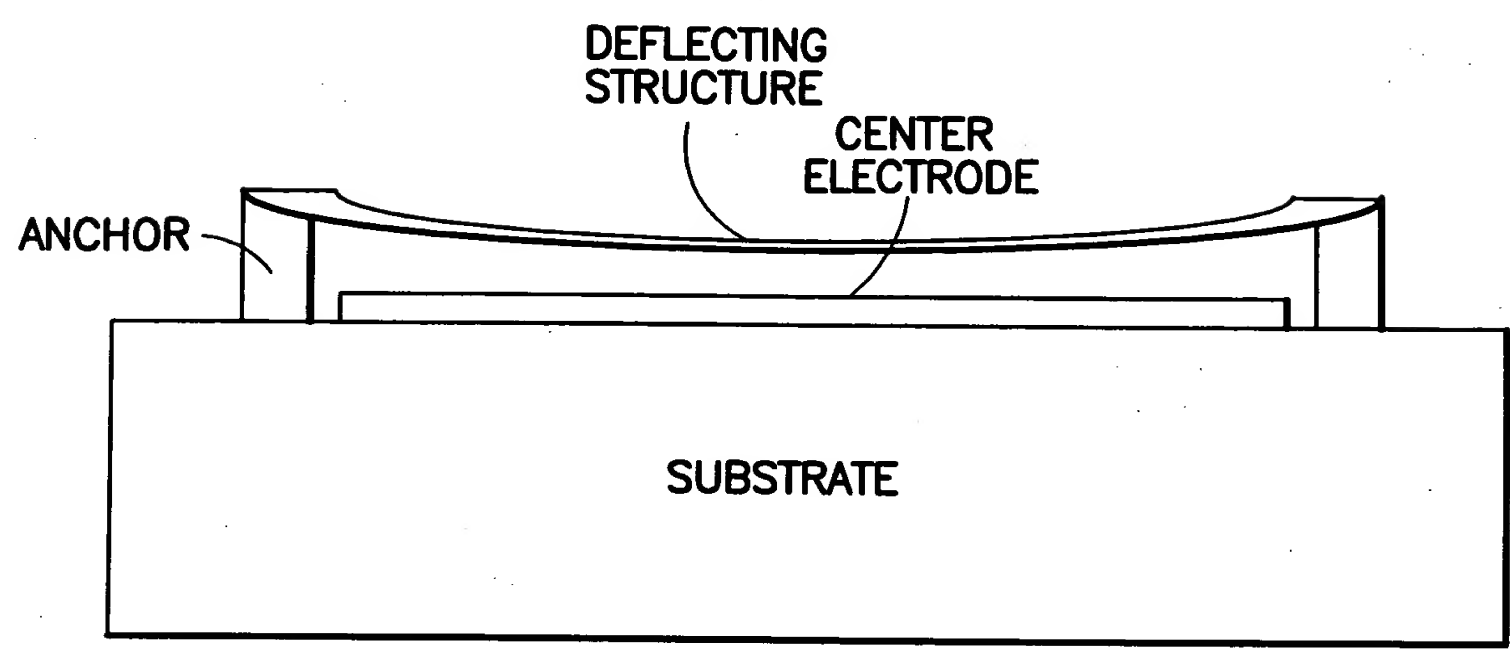


FIG. 6a
PRIOR ART

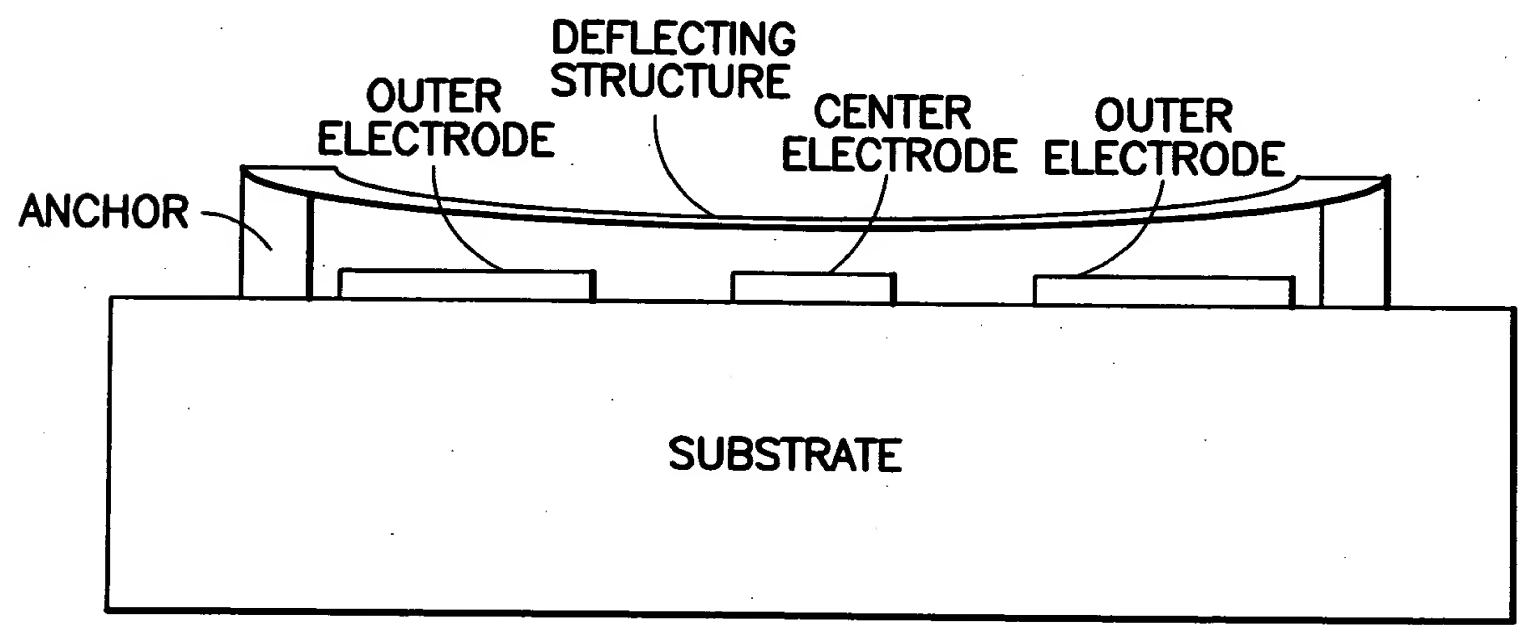


FIG. 6b

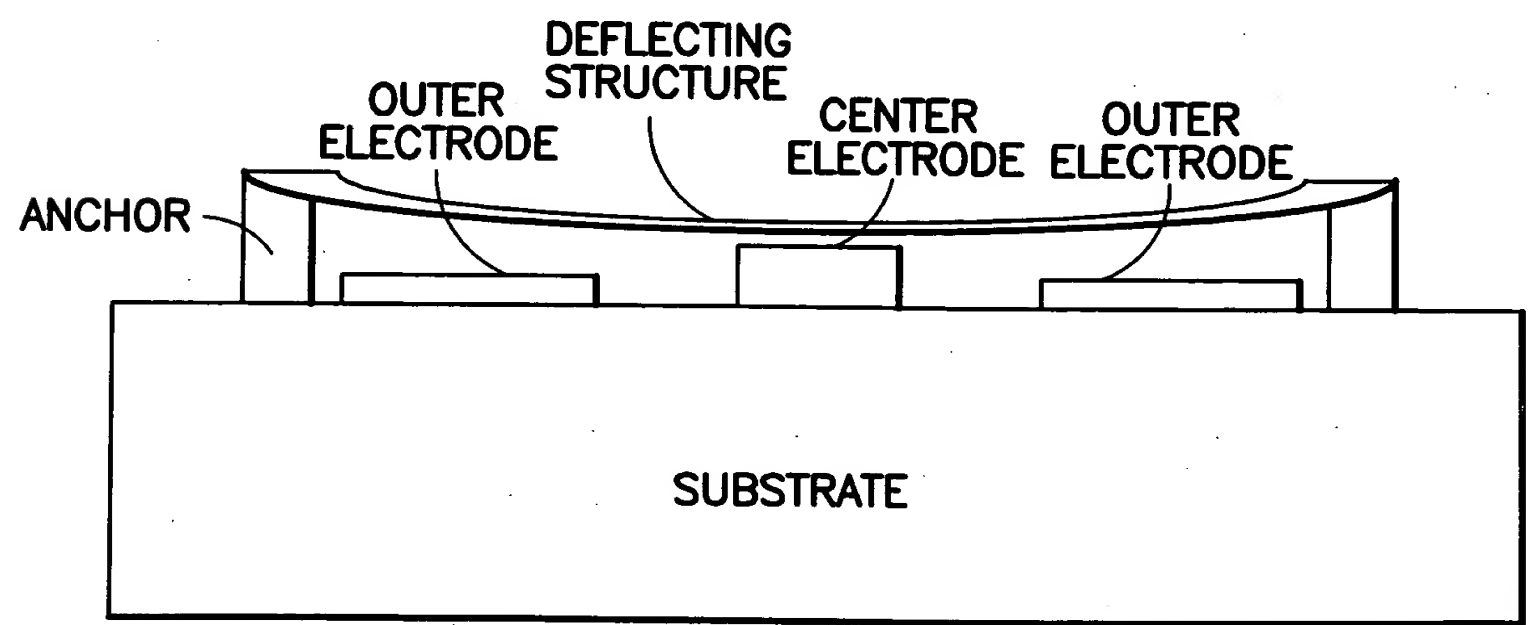


FIG. 6c



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FIG.7a

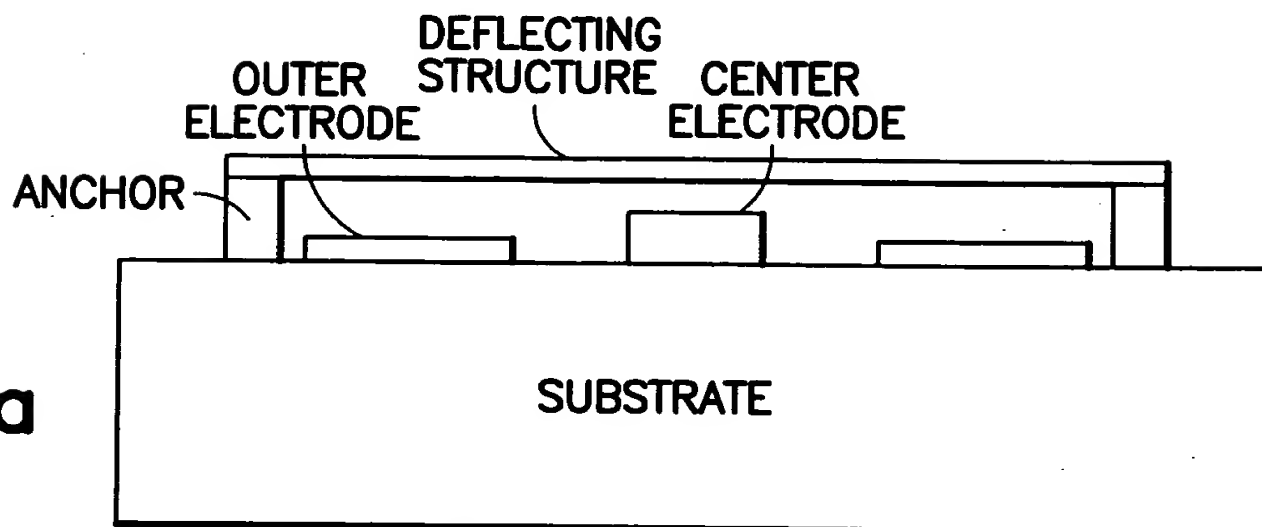


FIG.7b

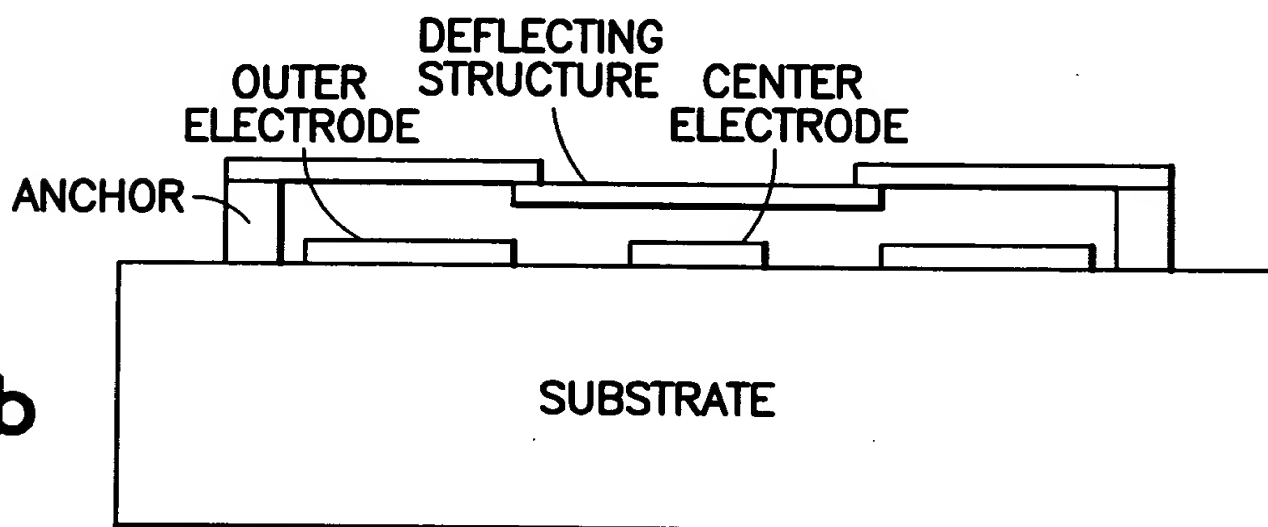


FIG.7c

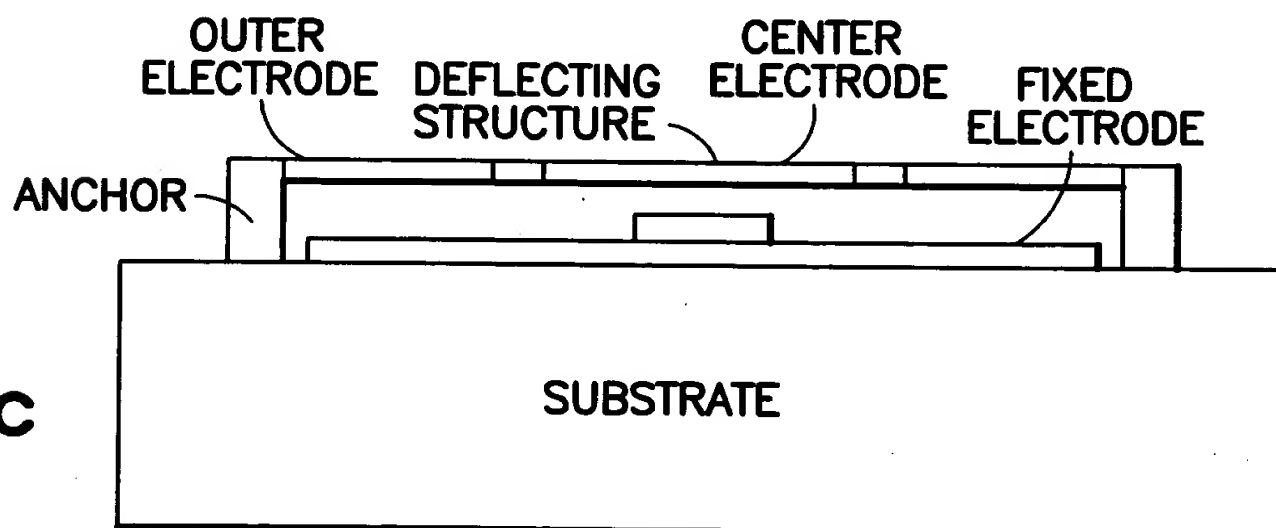
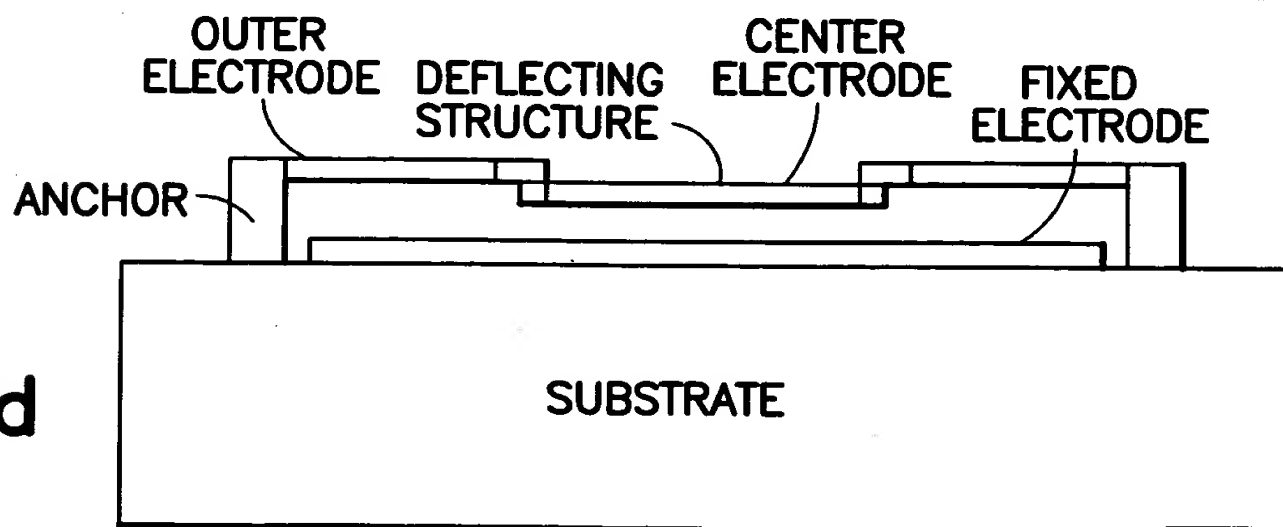


FIG.7d





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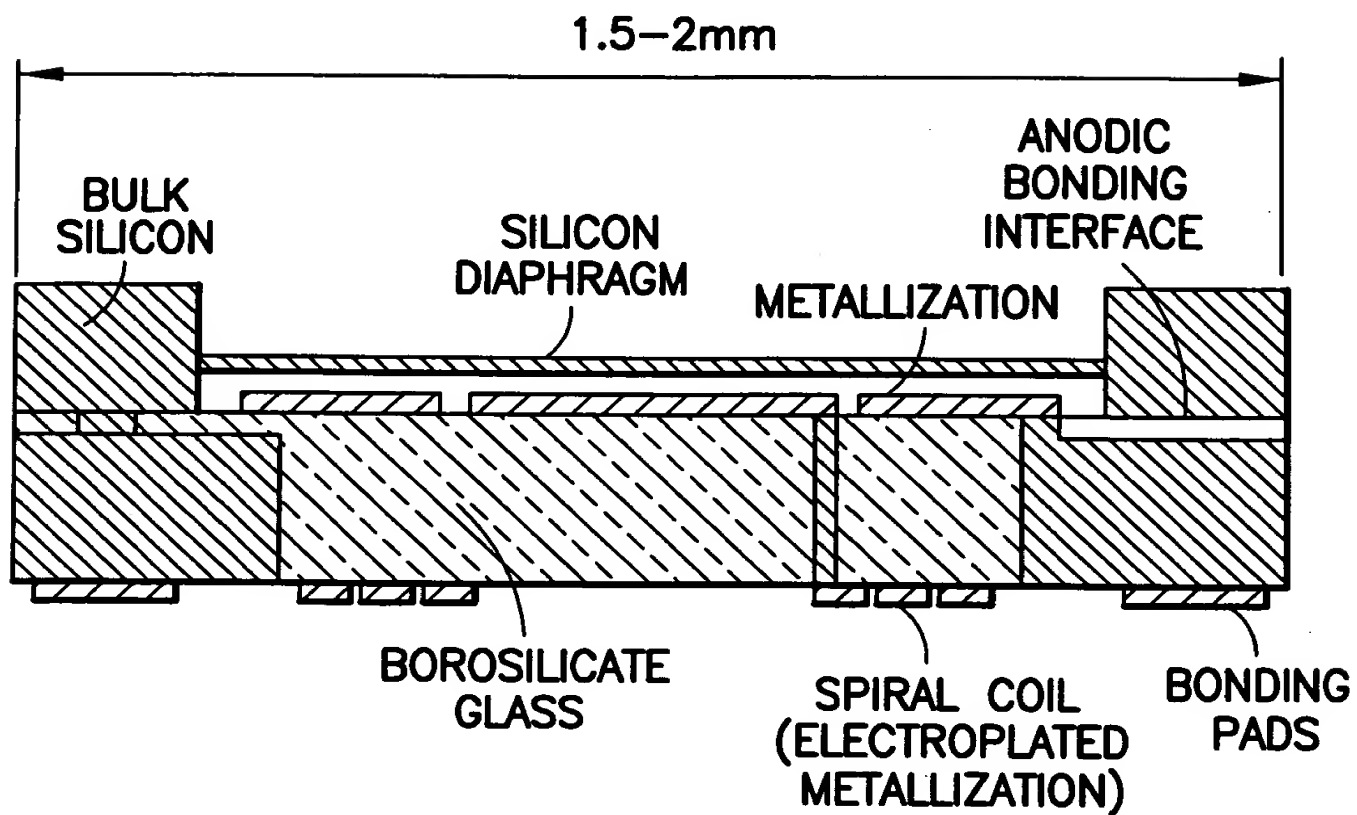


FIG.8a

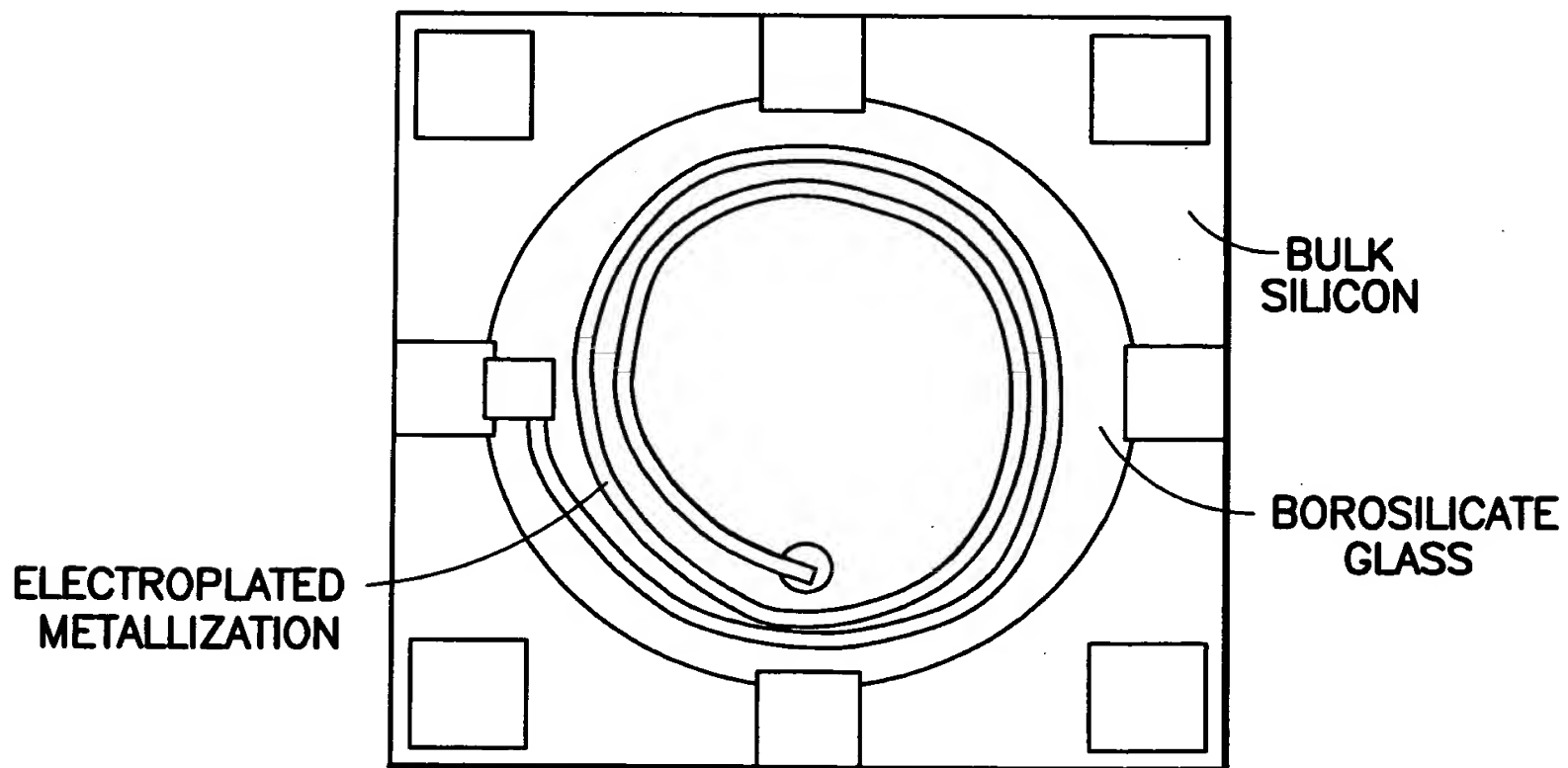


FIG.8b



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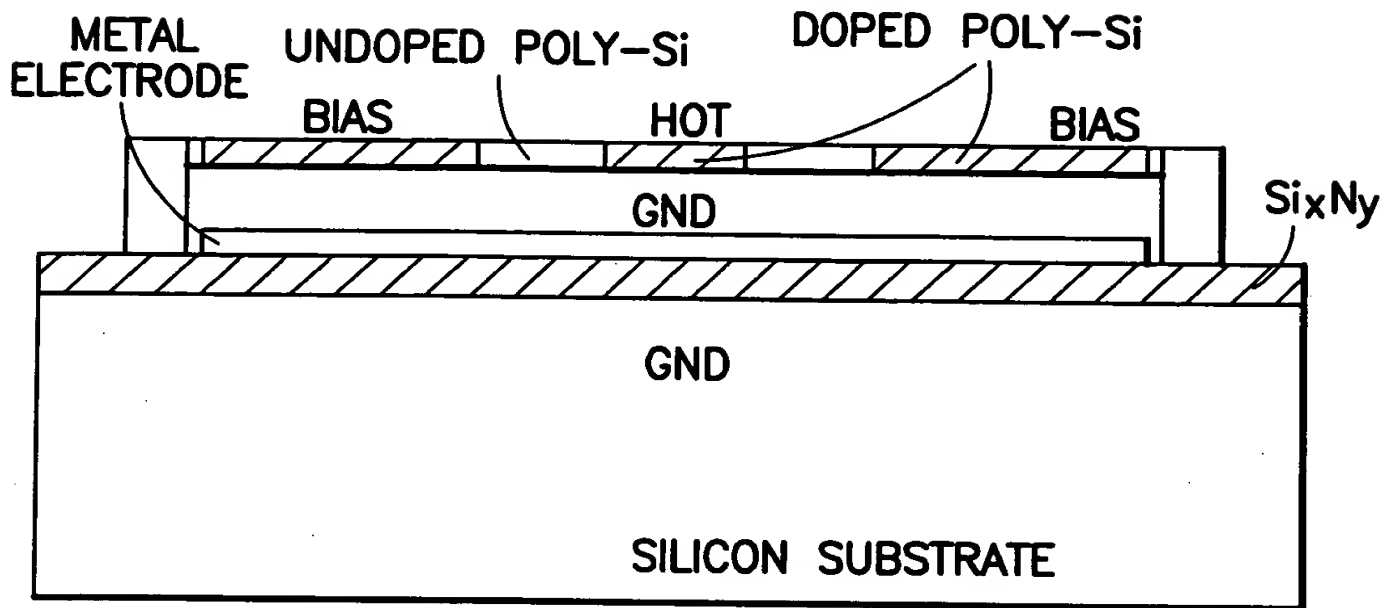


FIG. 9

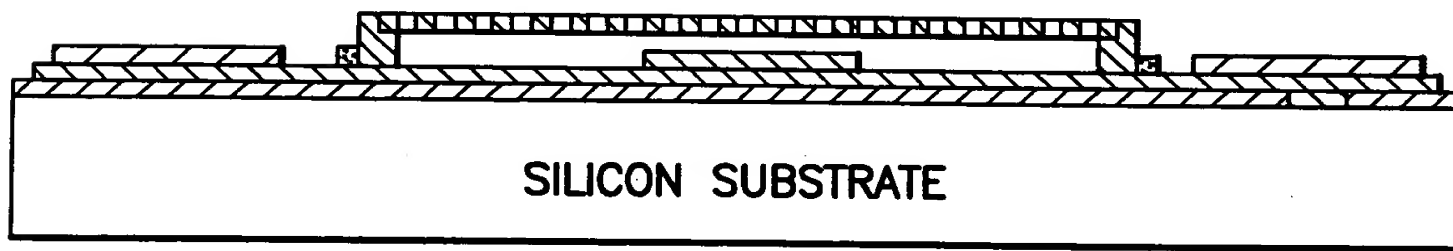


FIG. 10b



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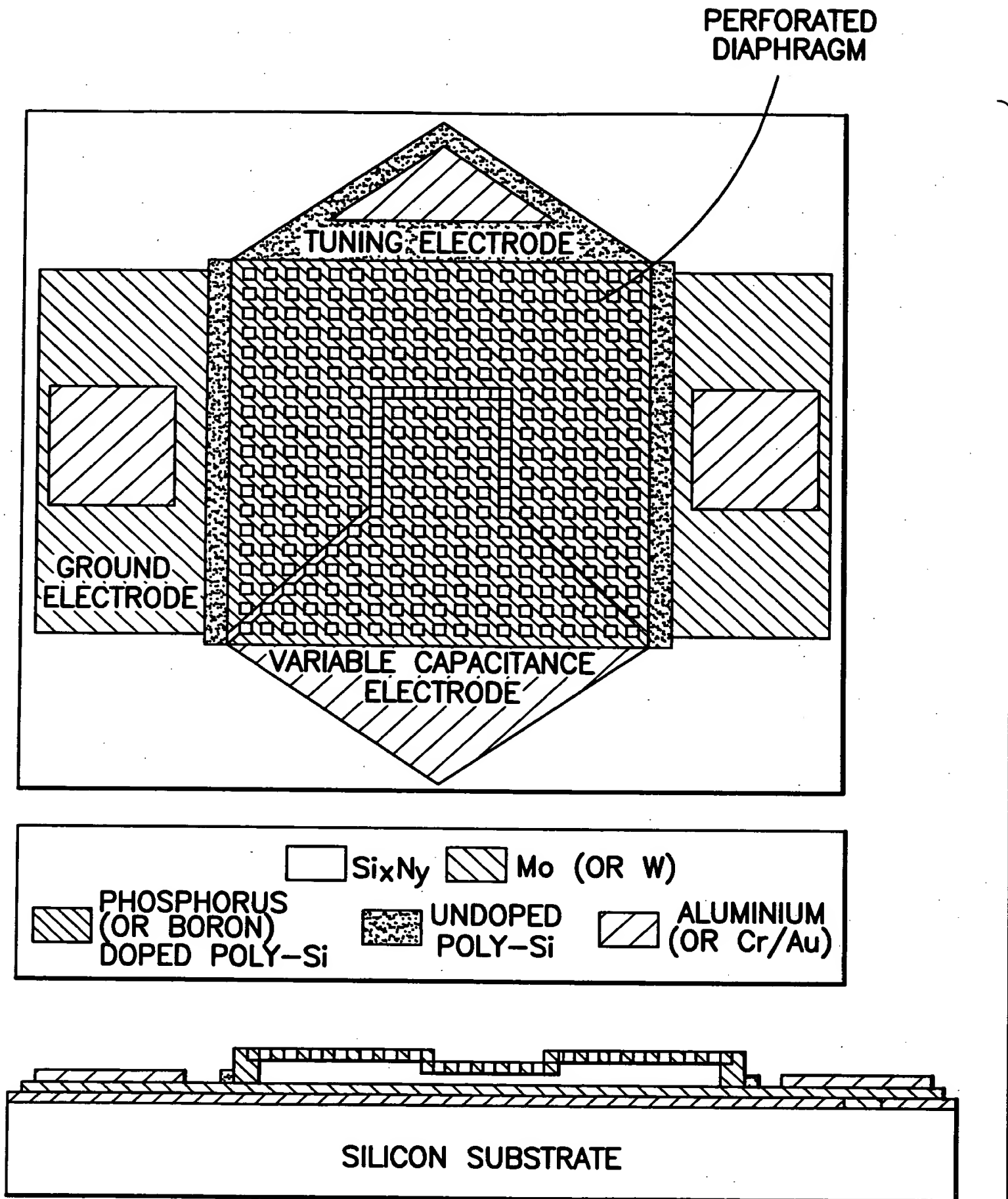


FIG.10a



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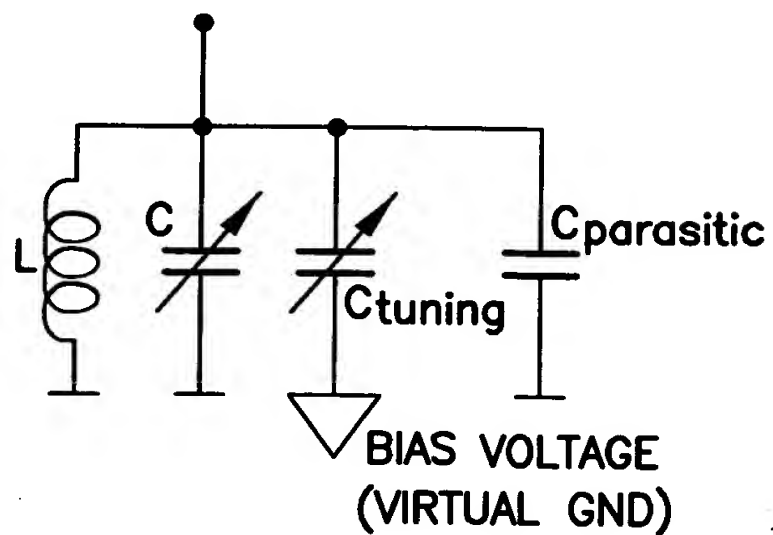
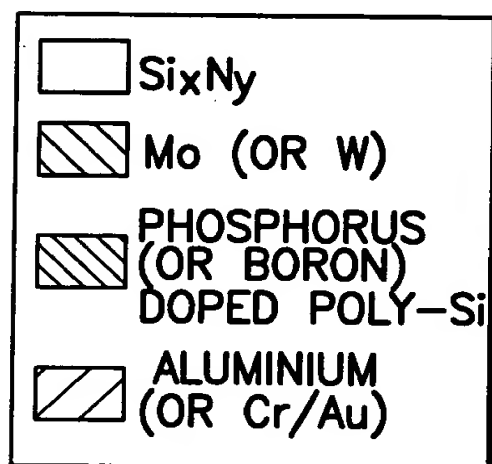
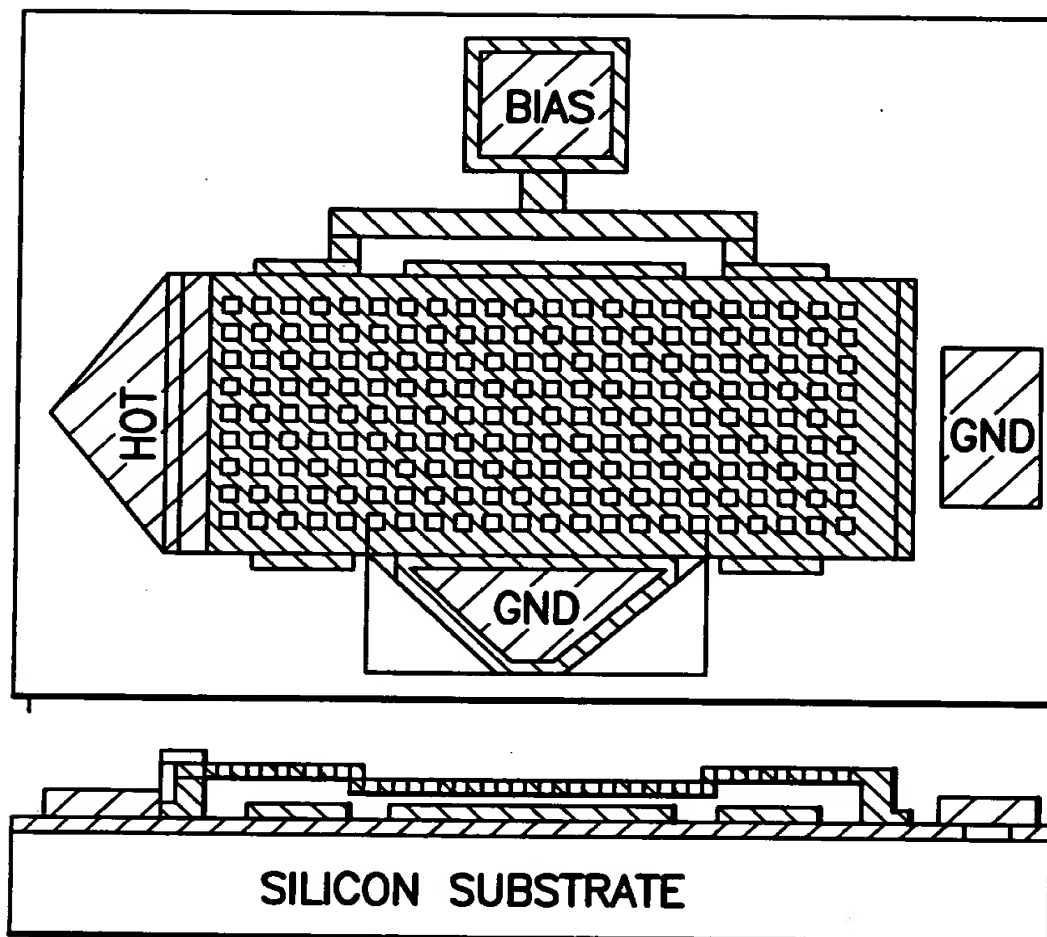
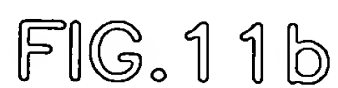
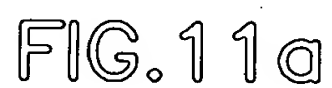


FIG.10c





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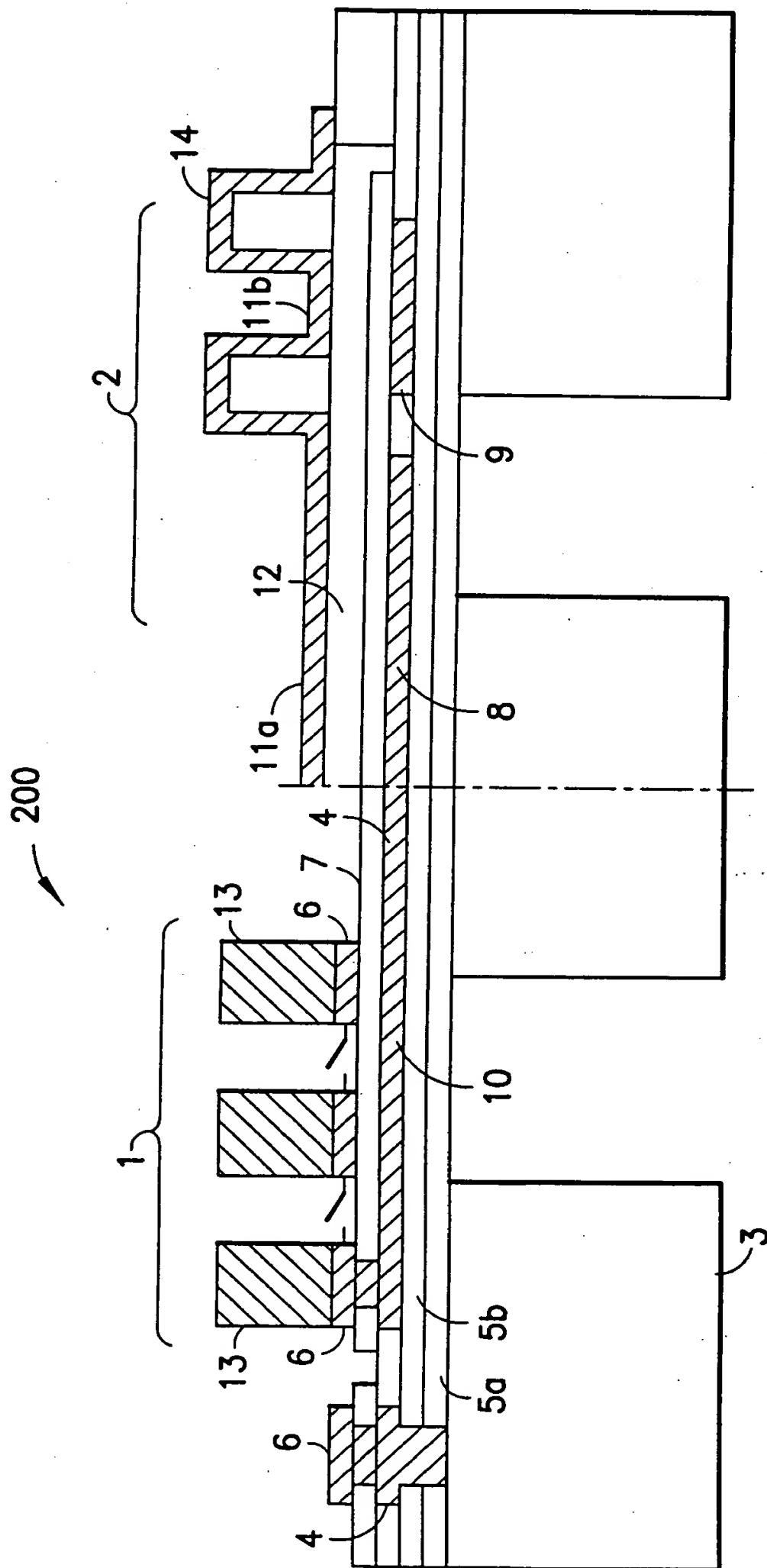


FIG.12